Allotment Evaluation (AE)
For
Esperanza Allotment (#561)

<table>
<tr><td>Permittee</td><td></td><td colspan="3">Authorization Number
3001041
3017924
3017944</td></tr>
<tr><td>Livestock Use</td><td>Preference
AUMs</td><td><u>Allotment</u>
00561</td><td><u>Active</u>
1,720</td><td><u>Suspended</u>
0</td></tr>
<tr><td></td><td>Period of Use</td><td><u>Authorization</u>
3001041
3017924
3017944</td><td><u>Kind</u>
92 Cattle
103 Cattle
153 Cattle</td><td><u>Season of Use</u>
06/07 – 10/31
05/01 – 10/31
05/01 – 10/31</td></tr>
<tr><td></td><td>Kind of Livestock</td><td colspan="3">Cow Calf</td></tr>
<tr><td></td><td>Percent Public Land</td><td colspan="3">AUMs are authorized at 83% public land</td></tr>
<tr><td>Allotment Profile</td><td>Physical Description</td><td colspan="3">Allotment 561 is located approximately 10 miles west of Cebolla, in Rio Arriba County, New Mexico. Elevation on this allotment is roughly between 6,500 and 7,400 feet. Landforms on the allotment include; arroyos, uplands and canyons. A portion of this allotment is located within the Rio Chama Special Management Area (SMA) and within the Rio Chama Wilderness Study Area (WSA).

Eight soil types are identified within the BLM lands in this allotment;

Amal silt loam, 2 to 8 percent slopes. This soil consists of silty loams, with rooting depths over 60 inches. Parent materials of alluvium and eolian material derived from shale comprise these soils. Hazards for erosion are slight to moderate. Average annual precipitation ranges between 14 and 16 inches. Vegetation is characterized by pinyon, juniper, blue grama, squirreltail, June grass, oak and sagebrush.

Berryman-Ruson association, 1 to 8 percent slopes. The soil consists of silt loams, with rooting depths over 60 inches. Parent materials of alluvium derived from limestone and shale comprise this soil. Hazards for erosion are moderate. Average annual precipitation ranges between 14 and 16 inches. Vegetation is characterized by western wheat, squirreltail, blue grama, alkali sacaton and sagebrush.

Calendar gravelly loam, 5 to 35 percent slopes. The soil consists of loams, with rooting depths around 40 inches. Parent materials of alluvium from shale comprise this soil. Average annual precipitation ranges between 14 and 17 inches. Hazards for</td></tr>
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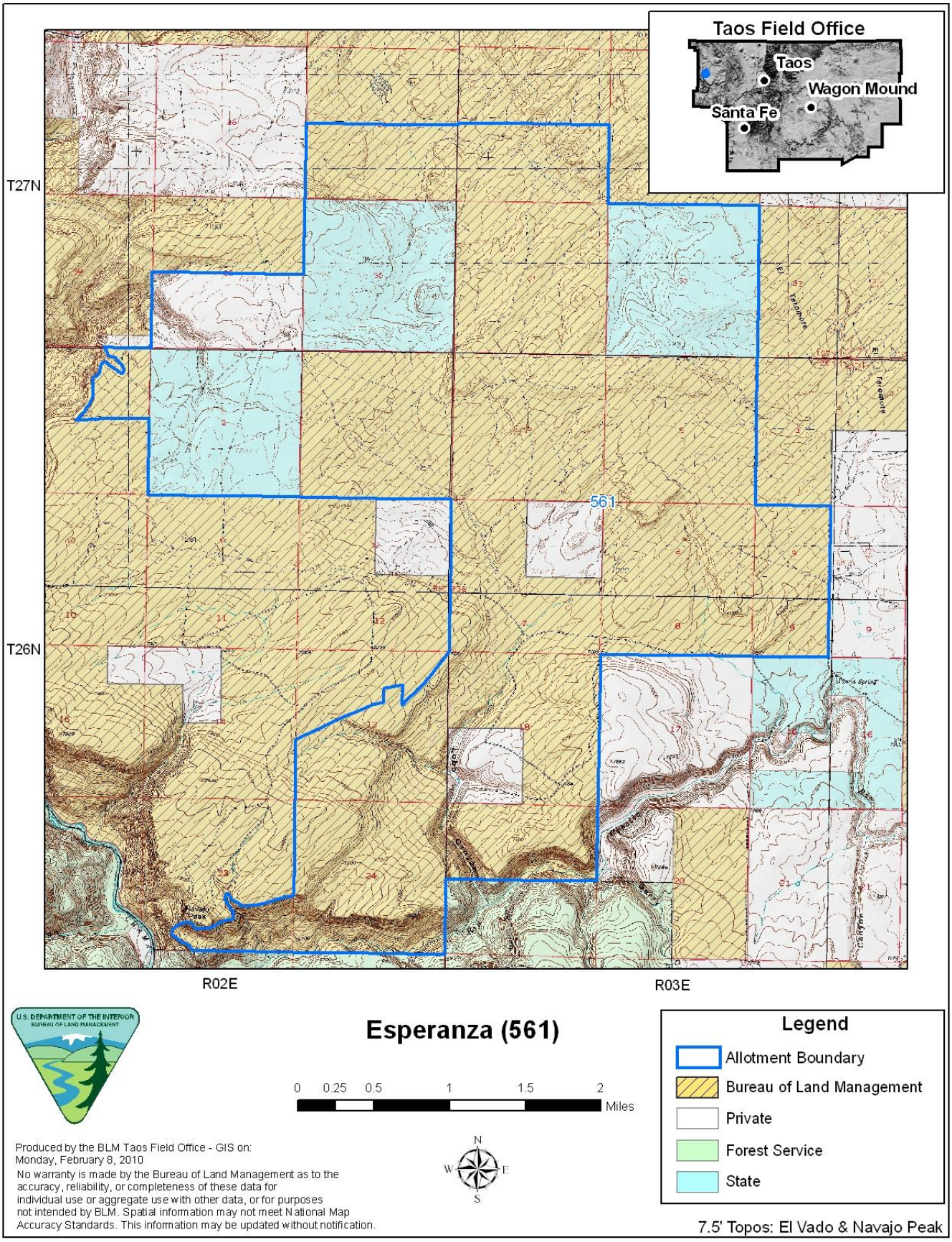
		erosion are moderate. Vegetation is characterized by pinyon, juniper, oak, june grass, muttongrass and sagebrush. Elpedro silt loam, 1 to 5 percent slopes. This soil consists of silty clay loams, with rooting depths over 60 inches. Parent materials of eolian sediments and alluvium derived from sandstone and shale comprise these soils. Average annual precipitation ranges between 12 and 14 inches. Hazards for erosion are slight to moderate. Vegetation is characterized by western wheat, blue grama, galleta, Indian ricegrass, and sagebrush. Menefee channery loam, 2 to 35 percent slopes. This soil consists of clay loams, with rooting depths between 20 and 40 inches. Parent materials of colluvium derived from shale comprise this soil. Average annual precipitation ranges between 12 and 14 inches. Hazards for erosion are severe. Vegetation is characterized by western wheat, bottlebrush squirreltail, prairie junegrass and sagebrush. Peney-Ransect association, 1 to 20 percent slopes. These soils consist of silty loams, with rooting depths between over 60 inches. Parent materials of alluvium and colluvium derived from limestone comprise these soils. Hazards for erosion are moderate to severe. Average annual precipitation ranges between 15 and 17 inches. Vegetation is characterized by pinyon, juniper, oak, prairie junegrass, bottlebrush squirreltail, mountain mahogany and Indian ricegrass. Teromote-Ruson association, 1 to 8 percent slopes. These soils consist of loam and clay loams, with rooting depths between over 60 inches. Parent materials of alluvium derived from shale comprise these soils. Average annual precipitation ranges between 14 and 17 inches. Hazards for erosion are moderate. Vegetation is characterized by blue grama, western wheat, galleta, Indian ricegrass, needle and thread, squirreltail and sagebrush. Tinaja-Rock outcrop complex, 45 to 75 percent slopes. These soils consist of loam and sandy clay loams, with rooting depths between over 60 inches. Parent materials of colluvium derived from sandstone comprise these soils. Average annual precipitation ranges between 13 and 15 inches. Hazards for erosion are slight to severe. Vegetation is characterized by pinyon, juniper, blue grama, sideoats grama, muttongrass and mahogany.
	Land Status Acreage	<u>BLM</u> <u>State</u> <u>Private</u> 6,612 1,899 479
	Management	The allotment is under an ‘Improve’ (‘I’) management category.

	Objectives	'I' category allotments are managed in accordance with the Allotment Management Plan to help the allotment achieve satisfactory ecological condition.
	Key Forage Species	blue grama, western wheat, Galleta, and prairie junegrass
	Grazing System	Deferred rotation
Management Evaluation	Actual Use	**AUMs** **Year** 1,062 2009 690 2008 762 2007 non-use 2006 100 2005 181 2004 382 2003 509 2002 1,515 2001 1,144 2000
	Utilization	Due to the lack of staff utilization studies have not been conducted. During the assessment visit it was determined that the allotment was either receiving slight to moderate amounts of utilization.
	Climate	The past water year (Oct. 1, 2008 – Sept. 30, 2009) the average temperature has been slightly above average (1 to 2 degrees Fahrenheit above average) and precipitation has been slightly above average (0 to 2 inches). The winter was slightly drier (0 - .75 inches below normal) and was warmer (2 - 3 degrees Fahrenheit above average). The spring was drier and warmer (1.5 – 2 inches below normal and 2 - 4 degrees Fahrenheit above average, respectively) This should provide below average plant growth for cool season plants. The summer was near average (0 - 1.5 above normal) and slightly warmer (0 - 1 above normal) which should provide near normal growth for warm season plants. Climate change is a concern not only in New Mexico but globally. "Effects of increasing atmospheric CO_2 levels on plants are predicted to cause dramatic changes in native vegetation. Global climate change may accelerate rates of plant extinction, while ecosystem structure and function may shift. Ecological response to global changes in climate could shift ecosystems (i.e., shrublands replacing grasslands) and have effects, not only to an individual species, but to the ecosystem itself by additions and deletions of vegetation species" (Johnson, H.B., and H.S. Mayeux. 1992. Viewpoint: A view on species additions and deletions and the balance of nature. Journal of Wildlife Management 45:322-333.) We anticipate that our monitoring efforts will help indicate vegetation shifts, allowing for management modifications to address global climate change.

	Trend	Four long term trend plots have been established on this allotment. They were established between 1989 and 1994 but they have not been read again due to a lack in staffing. A Rangeland Health Matrix was completed on June, 8 2009. The actual survey forms are available within the allotment file. Below is a summation of the information gathered by the survey. Within the Rangeland Health Attributes are three different categories of indicators. The categories include; Soil and Site Stability, Hydrologic Function and Biotic Integrity. The percent of indicator score was created by multiplying an assigned value for departure from site descriptions/reference areas by the number of indicators at the level. Departure scores are categorized as: none to slight = 5, slight to moderate = 4, moderate = 3, moderate to extreme = 2 and extreme = 1. For example, if all indicators under Soil/Site Stability were rated none to slight (best condition), the equation would be 5(score)*10indicators=50/50*100 = 100% similarity, or what is expected based on an Ecological Site Description. Standards for each individual category are met when they are rated Proper Functioning Condition or Functioning at Risk-Upward Trend. Not meeting standards are ratings of; Functioning at Risk-Static, Functioning at Risk-Downward Trend and Non Functional. Soil and Site Stability Two indicators were deemed None to Slight, five were deemed Slight to Moderate and three were deemed Moderate. Rating: 78% Hydrologic Function Two indicators were deemed None to Slight, five were deemed Slight to Moderate and three were deemed Moderate. Rating: 78% Biotic Integrity Five indicators were deemed None to Slight and four were deemed Slight to Moderate. Rating: 91% Overall Rating: 84% Soils were rated at Functioning at Risk-Upward Trend, Biotic Flora was rated at Functioning at Risk-Upward Trend, and Biotic Fauna was rated at Proper Functioning Condition. Based on a review of past assessments upland portion of this allotment is on the upward trend. Riparian areas have rated as Proper Functioning Condition for the Rio Cebolla and Functioning at Risk-Upward Trend for Lobo Canyon (see the Riparian section below for details).

	Riparian	Two riparian areas are located within the allotment boundary, the Lobo Canyon and Rio Cebolla areas. The Lobo Canyon was assessed in 2009 and was rated as Functioning at Risk-Upward Trend. It was determined to be a very flashy system with the sediment load resulting as a function of the topography more than any specific land use practice. Willows were establishing as well as sedges on the point bars. The Rio Cebolla was assessed last in 1994 and was rated as Proper Functioning Condition. It was stated in that assessment that the riparian area had reached its limit. Both of these riparian areas are being managed for the recovery of potential southwest willow catcher habitat.
	Wildlife	Seasonal home ranges in the allotment include those for elk, deer, bobcat, fox, coyote, small mammals, bats, raptors, turkey vulture, songbirds, and a variety of insects. Elk and deer are grazers; however there is little dietary overlap between deer and cattle. Best management practices would ensure that forage production within this area can support both wildlife and livestock on a sustained basis. Critical wildlife areas on the allotment include winter range for elk and deer. An important migratory corridor for avian and big-game species also occurs inside the allotment boundaries.
	Threatened and Endangered Species	It is determined that there are no federally listed threatened or endangered species likely to be found in the subject allotment. There is no designated critical habitat for any species listed by the USFWS within the allotment. Special status species that are likely to be found on the allotment include bald eagle and ferruginous hawk.
Conclusions and Recommendations		Overall, the vegetation appears to be in fair to good condition with fair to good diversity. The vegetation treatments that have occurred in recent years have greatly increased forage production. Continued monitoring, as well as establishing more monitoring sites will help establish true trend data and any possible changes in the future. It is recommended that grazing be renewed for another 10 years without any changes to the permit.



Esperanza (561)

0 0.25 0.5 1 1.5 2 Miles

N
W E
S

Legend

- Allotment Boundary
- Bureau of Land Management
- Private
- Forest Service
- State

7.5' Topos: El Vado & Navajo Peak

Produced by the BLM Taos Field Office - GIS on:
Monday, February 8, 2010

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